

ACOUTRAP

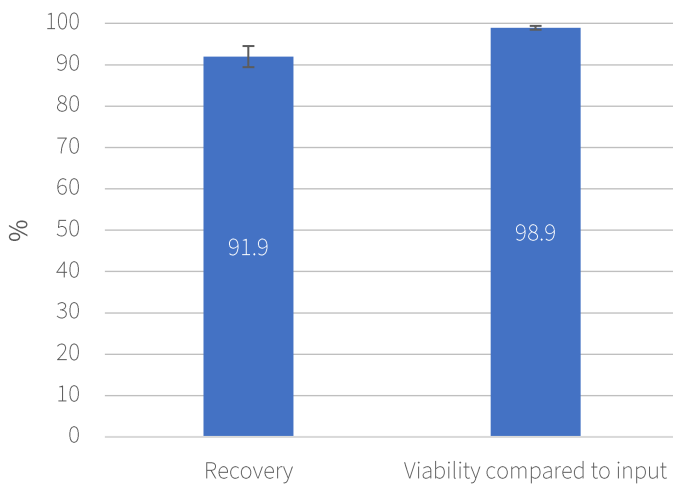
APPLICATION NOTE

INTRODUCING: CELL TRAPPING WITH ENHANCED CAPACITY

Preparation of cell samples for flow cytometry typically involves staining with fluorescent antibodies. To improve specificity, a centrifugation-based wash is often performed, requiring several manual handling steps. This process can dramatically decrease the recovery and viability of the sample and is especially ill-suited for samples with low cell numbers. AcouTrap is an automated platform for performing efficient staining and washing of cells with high recovery.

Automated & efficient washing of up to 0.5 million cells

- AcouTrap enables automated washing with minimized cell loss
- Gentle wash of up to 0.5 million cells per sample
- Sample processing at 50-300 $\mu\text{L}/\text{min}$
- >99% washing efficiency after 1 minute of washing
- High recovery and maintained cell viability



Recovery and viability of 400,000 cells with AcouTrap processing (n=14 and n=8, respectively).

Washing time	Fluorescein removal
1 min.	99.63 %
2 min.	99.90 %

Washing efficiency after 1 and 2 minutes measured using fluorescein (n=2 and n=3, respectively).

Cultured Jurkat cells were washed using AcouTrap. For recovery analysis, samples were measured directly using flow cytometry (Guava easyCyte, Luminex). For viability assessment, samples were stained using PI (BD Biosciences). None of the samples showed a decrease in viable cells compared to the input sample. For washing efficiency evaluation, 1 $\mu\text{g}/\text{mL}$ fluorescein was added to the cell samples. After washing, the remaining fluorescein was measured using a fluorescence plate reader (Tecan Infinite 200 Pro).